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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,247	07/23/2003	Peter R. Harvey	RDTI-0012	9298
23377	7590	01/26/2004	EXAMINER	
WOODCOCK WASHBURN LLP			GAY, JENNIFER HAWKINS	
ONE LIBERTY PLACE, 46TH FLOOR			ART UNIT	
1650 MARKET STREET			PAPER NUMBER	
PHILADELPHIA, PA 19103			3672	

DATE MAILED: 01/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/625,247

Applicant(s)

HARVEY ET AL.

Examiner

Jennifer H Gay

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-28 is/are allowed.
- 6) ☒ Claim(s) 1,2,5-13,16-20 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 3,4,14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10-17-03. 6) ☐ Other: .

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8-13, 16, and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Tighe (US 4,076,084).

*Regarding claims 8, 16, and 29:* Tighe discloses a system for orienting a drilling tool.

The system includes the following features:

- A stabilizer body (11) that is connectable to a drill string (see Figures 1 and 2).
- A sleeve (10) rotatably mounted to the body.
- A stabilizer blade (15, 15a, 16, and 16a) that projects radially outward from the sleeve.
- A locking member (3) that moves between a first position where the sleeve is in a first circumferential position and a second position where the sleeve is free to rotate. (See Figures 8-13)

*Regarding claims 9 and 30:* The locking member also locks the sleeve in a second circumferential position. (See Figures 8-13)

*Regarding claim 10 and further regarding claim 16:* The locking member is coupled to a piston (8) that moves the locking member from the first to the second position.

*Regarding claims 11, 12, and 31 and further regarding claim 16:* As recited in column 4, lines 59-64 and column 5, lines 5-50, the piston is actuated by fluid pressure in the drilling string.

*Regarding claim 13 and further regarding claim 16:* The piston includes a spring (39) that intensifies the pressure applied to the piston.

3. Claims 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nasr et al. (US 6,179,066 B1).

*Regarding claim 17:* Nasr et al. discloses a stabilization system that includes the following features:

- A stabilizer body (214) that is connectable to a drill string.
- A stabilizer blade (214a-214n) mounted on the body and moveable between a first and second position (see col. 5, lines 30-45).
- A sensor (301) for sensing the position of the blade.

*Regarding claim 18:* The system further includes a magnet coupled to the blade where the sensor senses the magnetic field created by the magnet. (See col. 6, lines 25-65)

*Regarding claims 19 and 20:* The system includes a means for storing the data collected by the sensor and either processing it downhole or transmitting the data to the surface. (See col. 6, lines 10-16)

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tighe (US 4,076,084) in view of Shirley (US 4,394,881).

*Regarding claim 1:* Tighe discloses a drilling tool orientator that consists of a positionable stabilizer. The stabilizer includes the following features:

- A stabilizer body (11) that is connectable to a drill string (see Figures 1 and 2).
- A sleeve (10) that is rotatably mounted to the body.
- A plurality of circumferentially displaced blades (15, 15A, 16, and 16A) that project radially outward from the sleeve. The blades rotate with the sleeve along a common circumferentially extending plane. (See col. 5, lines 5-50)

Tighe discloses all of the limitations of the above claims except for a second stabilizer mounted on the drill string where the second stabilizer is axial spaced from the first stabilizer. As seen in Figure 1, Shirley teaches a drill steering apparatus that includes two axial spaced stabilizers. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have included a second stabilizer as taught by Shirley on the orientator of Tighe in order to have provided a system for ensuring the stability of the drill string.

*Regarding claim 2:* Tighe discloses a locking mechanism (3 and 8) for locking the sleeve in a first and second circumferential orientation (see Figures 8-13).

*Regarding claim 5:* The first and second orientations of the stabilizer of Tighe are located about 180° apart (see Figures 8-10).

*Regarding claim 6:* As seen in Figure 4 of Tighe, the blades of the stabilizer are spaced about 90° apart.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tighe (US 4,076,084) in view of Shirley (US 4,394,881) as applied to claim 1 above, and further in view of Nasr et al. (US 6,179,066 B1).

Tighe and Shirley discloses all of the limitations of the above claims except for a sensor being mounted on the distal end of one of the blades of the stabilizer where the sensor is used to detect a property of the formation that is being drilling through.

As recited in column 5, lines 1-15, Nasr et al. teaches a wellbore stabilizer that includes a sensor on the blade/pad of the stabilizer. The sensor can be used to measure a wide variety of wellbore and formation properties.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have included the sensor taught by Nasr et al. on the blade/pad of the stabilizer of Tighe in view of Shirley in order to have used a system that provided an improved quality of formation evaluation measurements.

#### ***Allowable Subject Matter***

7. Claims 21-28 are allowed.

Art Unit: 3672

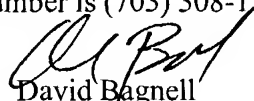
8. Claims 3, 4, 14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

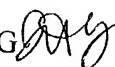
**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H Gay whose telephone number is (703) 308-2881. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (703) 308-2151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

  
David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

JHG   
January 20, 2004